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WATER QUALITY TECHNOLOGY DEGREE AUGMENTS EDUCATIONAL OPPORTUNITIES



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Water Quality Technology Degree Augments Educational Opportunities for Water Treatment Operators

Synopsis:

Learn about Pellissippi State's new degree program, designed from industry feedback and tailored to prepare operators for the workforce and state certification. This unique program, the only one of its kind in the southeast region, has successfully trained more than a dozen new drinking water or wastewater plant operators. Graduates are equipped to assume leadership roles from the start of their careers, and all have been employed in full-time positions prior to graduation.

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In coordination with local utilities in East Tennessee, Pellissippi State Community College created a new degree program, which launched its first cohort of students in August 2019. Pellissippi State, based out of Knoxville, is Tennessee's largest community college, with five campuses and approximately 10,000 students. The Water Quality Technology Program startup was initially funded by the National Science Foundation (Grant #1800789) and the goal of the program is to train water and wastewater operators to restore the retiring workforce. Upwards of 50% of the current workforce is estimated to retire within the next three to five years in Tennessee. With similar trends seen nationally, this field is in great need of highly-qualified individuals.

This novel approach to training and education includes a two-year Associate of Applied Science degree with coursework focusing on interdisciplinary STEM and water-specific curriculum. Mathematics, chemistry, biology, engineering, leadership, and professionalism are heavily emphasized. As part of the Water Quality Technology courses, students complete mandatory site visits and field experience every semester, including an internship and capstone project prior to graduation.

Ten students with no previous knowledge of the water/wastewater industry have been successful at securing full-time employment and advancing within their organizations as a direct result of the skills learned through the program. Students have also had the opportunity to attend regional and state conferences, and to network with industry professionals. Pellissippi State has adapted the curriculum based on direct industry feedback to produce the most well-rounded and prepared graduates. Currently, three students have graduated with the degree, and four students have passed the Grade III Tennessee Certification in either Water or Wastewater Operations.

With flexible scheduling and non-traditional course offerings, students of all backgrounds and life stages can complete the coursework. Night classes accommodate working students, and because almost all courses can be taken online, geographical location is no longer a barrier to obtaining the degree. Another unique opportunity presented by the degree program is that certified operators receive coursework credit for their experience and certification level and can complete a college degree with roughly one year of course work. Although still in its early stages, Pellissippi State's Water Quality Technology Program has shown success to help increase the number of skilled and much-needed operators who keep the water and wastewater industry running.